

REMARKS/ARGUMENTS

Favorable consideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-37 are pending in the application, with Claims 1, 33 and 34 amended by the present amendment.

In the outstanding Office Action, Claims 1-3 and 5-37 were rejected under 35 U.S.C. § 102(b) as being anticipated by Giger et al. (U.S. Patent No. 5,832,103, hereinafter Giger); Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Giger in view of Nishikawa et al. (U.S. Patent No. 6,058,322, hereinafter Nishikawa).

Claims 1, 33, and 34 are amended to recite that the known image data set includes known diagnoses. Support for this amendment is found in Applicants' originally filed specification. No new matter is added.

Briefly recapitulating, Claim 1 is directed to a method for computer assisted interpretation of a medical image, comprising: (a) obtaining image data representative of a medical image; (b) computing at least one feature characteristic of the image data; (c) comparing the computed feature characteristic to corresponding computed feature characteristics derived from images in a known image data set having known diagnoses; (d) selecting image data from images of the known image data set having corresponding computed feature characteristics similar to the feature characteristics computed in the computing step; and (e) displaying at least one of the selected image data and the obtained image data. The claimed method provides for improved characterization and classification of medical images by giving a radiologist an opportunity to visually compare a medical image with selected images having similar feature characteristics and which have known diagnoses, where the radiologist's diagnosis is readily facilitated.¹

¹ Specification, page 6, lines 4-6.

Giger discloses a method and system for automated detection and classification of masses in mammograms, where the method includes (a) obtaining an image of a portion of said human body; (b) obtaining a runlength image using said image; (c) performing multi-gray-level thresholding and size analysis on said runlength image; (d) detecting whether said runlength image contains a location potentially corresponding to said mass based on thresholding performed at plural gray-level threshold levels in said performing step; (e) classifying said mass; and (f) determining a likelihood of malignancy of said mass. The method is applied to a current image and/or a historical image, with the extracted lesion features used either individually or merged as inputs to an artificial neural network.²

However, contrary to the Official Action, Giger does not disclose Applicants' claimed steps of (c) "comparing the computed feature characteristic to corresponding computed feature characteristics derived from images in a known image data set having known diagnoses" or (d) "selecting image data from images of the known image data set having corresponding computed feature characteristics similar to the feature characteristics computed in the computing step." The disclosure of Giger³ cited for a teaching of Applicants' claimed "comparing" and "selecting" steps are directed to (a) the extraction of features and (b) the determination of cutoff values used for merging and classifying regions. However, neither the cited passages nor any other passages of Giger disclose Applicants' claimed "comparing" and "selecting" steps.

Applicants have also considered the Nishikawa and submit this reference does not cure the deficiencies of Giger. Applicants therefore submit this rejection does not meet the burden of proving unpatentability as none of the cited prior art, individually or in combination, disclose or suggest all the elements of independent Claim 1. Therefore, Applicants submit the inventions defined by Claim 1, and all claims depending therefrom, are

² Giger, column 4, lines 36-41; column 5, lines 15-25.

³ Giger, column 5, lines 15-26, and column 6, lines 28-39.

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not anticipated and are not rendered obvious by the asserted prior art for at least the reasons stated above.⁴ For similar reasons, Applicants submit the inventions recited in independent Claims 33 and 34 are also not anticipated and are not rendered obvious by the cited references.

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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⁴ MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest **all** the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."